ENCLOSURE 2

No Further Action At This Time Determination

Louisiana Department of Environmental Quality, Remediation Services Division August 31, 2006



DEPARTMENT OF ENVIRONMENTAL QUALITY

KATHLEEN BABINEAUX BLANCO GOVERNOR MIKE D. McDANIEL, Ph.D. SECRETARY

FILE COPY

REC'D SEP 0 5 2006

AUG 3 1 2006

CERTIFIED MAIL - RETURN RECEIPT REQUESTED (7004 1160 0000 3798 0422)

Mr. Earl Hayden Shell Chemical LP One Shell Plaza 910 Louisiana Street Houston, TX 77002-4916

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G	EOSYNTEC CONSULTANTS
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PROJECT NO.	SB0337
PROJECT NAI	
CATEGORY:	
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RE:

No Further Action Notification

Shell Chemical LP - Taft Facility; AI Number 583

Hahnville, St. Charles Parish

Dear Mr. Hayden:

The Louisiana Department of Environmental Quality – Remediation Services Division (LDEQ-RSD) has completed its review of your *Groundwater DNAPL Delineation Report* dated August 16, 2006 for the above referenced facility located in St. Charles Parish. Based on our review of this document and all previously submitted information, we have determined that no further action is necessary at this time. The Basis of Decision for this notification is attached.

No soils may be removed from this site without prior approval from LDEQ unless they are removed and disposed at a permitted disposal facility.

If you have any questions or need further information, please call Jeffrey Jones at (225) 219-3397. Thank you for your cooperation in addressing this site.

Sincerely,

Keith L. Casanova, Administrator Remediation Services Division

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Attachment

ENVIRONMENTAL ASSESSMENT

PO BOX 4314, BATON ROUGE, LA 70821-4314 P:225-219-3236 F:225-219-3239 WWW.DEQ.LOUISIANA.GOV

c: Imaging Operations - SW

Jeffrey Jones, LDEQ, Environmental Technology Division, Geology Section Carolyn Bourn, LDEQ, Environmental Technology Division, Toxicology Section

GeoSyntec Consultants, Attn.: Warren Brady 5420 Corporate Blvd., Suite 303, Baton Rouge, LA 70808

Environmental Issues Management, LLC, Attn.: Robert Phelan 75438 River Road, Covington, LA 70435

BASIS OF DECISION FOR NO FURTHER ACTION Shell Chemical LP – Taft Facility AI# 583

The Louisiana Department of Environmental Quality – Remediation Services Division (LDEQ-RSD) has determined that the Shell Chemical LP – Taft Facility requires No Further Action At This Time.

The Facility previously produced polybutylene in bulk pellet form from 1972 through 2002, and was operated by Shell Chemical LP (Shell) from 1977 until its closure. Surface releases of Dowtherm G^{TM} (a heat transfer fluid) were reported and site investigations and remediation focused on constituents of this product.

Soil and groundwater assessments at the former Taft Plant were conducted to address potential impacts of Dowtherm GTM. A chronological list of corrective action activities including site assessment, risk characterization, and remedial actions is summarized as follows:

- In the mid-1980's, Shell installed 20 shallow groundwater assessment wells to determine if the component constituents of Dowtherm GTM had impacted groundwater underlying the site. Groundwater samples from these wells were collected and analyzed for total petroleum hydrocarbons (TPH), volatile organic compounds (VOC), and semi-volatile organic compounds (SVOC) since 1988.
- In 1990, Shell conducted a Phase I assessment to further investigate the distribution of Dowtherm GTM, SVOCs, and TPH in soils. Soil borings were drilled to a depth of 50 feet below ground surface and the previously installed monitoring wells were gauged and sampled.
- In 1992, Shell conducted a Phase II assessment to delineate the extent of site constituents in shallow and deep groundwater. This included an evaluation of the hydrogeologic conditions influencing the occurrence and migration of constituents in groundwater and soil. As a result of this investigation, an Interim Measures Plan was submitted to the LDEQ that described the assessment results to date and provided a plan to address the presence of residual DNAPL observed in site monitoring wells¹. The plan called for the thickness of DNAPL to be gauged on a semiannual basis. If DNAPL was encountered, the DNAPL was removed with a bailer and disposed of in accordance with regulatory requirements. DNAPL gauging and recovery was performed on a quarterly basis until 2003.
- A risk assessment report was prepared in 1993 to evaluate the potential risks due to industrial exposure to chemicals detected on site. The calculated risks were below the

¹ Woodward-Clyde Consultants, 1994. "Interim Measures Plan. Shell Chemical Company, Taft, Louisiana."

USEPA target risk range of 10⁻⁴ to 10⁻⁶ for incremental cancer risk and less than 1 for non-carcinogenic risks.

- In January 1998, Shell submitted a Risk-Based Corrective Action (RBCA) Plan for the site. The submittal was consistent with the LDEQ Draft RBCA program. The RBCA Plan concluded that groundwater impacts did not require further corrective action.
- In September 2003² and April 2004³, Shell provided an updated RECAP assessment and addendum, respectively, to LDEQ in response to LDEQ comments on previous submittals. The RECAP Addendum included a DNAPL Source Characterization and Recovery Plan to improve the characterization and delineation of the soil residual DNAPL source. LDEQ provided a conditional approval of the RECAP addendum requesting additional soil and groundwater sampling in the DNAPL Source Characterization and Recovery Plan.
- In 2005, a soil investigation in the vicinity of wells with measurable DNAPL (MW-5, MW-11, and MW-19) was conducted to refine the delineation of residual DNAPL in soil. In addition, all monitoring wells were gauged for the presence of DNAPL and a subset of existing wells and a temporary well located between MW-11 and MW-19 were sampled for VOCs and SVOCs.
- A DNAPL gauging and recovery program was also conducted during 2005. On a quarterly basis, DNAPL was only routinely recovered from three shallow monitoring wells (MW-5, MW-11, and MW-19) and the subsequent recovery was documented and provided to LDEO.
- Results from these sampling programs indicated that groundwater in the area of the three wells with DNAPL (MW-5, MW-11, and MW-19) was the sole medium at the site that exceeded site RECAP standards.
- In 2006, an investigation was conducted in the immediate vicinity of the above mentioned wells to refine the residual DNAPL delineation in the shallow-zone groundwater. The results of this investigation were used to identify the soils to be excavated for site remediation. The excavation was conducted in July 2006 and documented in the DNAPL Remediation Report⁴ (GeoSyntec, 2006c).

² URS, 2003. "Risk Evaluation Corrective Action Program (RECAP), Shell Taft Plant, St. Charles Parish, Louisiana, LDEQ AI No. 583," Shell Chemical Company, Taft, Louisiana, September 18.

³ GeoSyntec Consultants, 2004. "Risk Evaluation Corrective Action Program (RECAP) September 18, 2003 Report Addendum, Shell Taft Plant, St. Charles Parish, Louisiana, LDEQ AI Number 583," Shell Chemical LP, Taft, Louisiana, July.

⁴ GeoSyntec Consultants, 2006. "Groundwater DNAPL Remediation Report, Shell Chemical LP, Taft, Louisiana, Al Number 583," August.

Remedial standards were developed for this property using LDEQ's RECAP Management Option 1 (MO-1) standards. The standards that were applied to this site are listed in the table that appears at the end of this BOD. The yield of the shallow-zone and deep-zone groundwater bearing units are below 800 gallons per day and no domestic or agricultural water supply wells are located within one mile of the site. Additionally, the nearest surface water body down gradient from the site is not classified as a drinking water supply. Consequently, the groundwater at this site is classified as GW3 non-drinking water. The Facility was previously used for industrial purposes. Although structures from historical industrial use are present at the site, the site is currently idle. In the future, the site will continue to be designated for industrial use.

Remedial actions consisted of the excavation and disposal of soil and groundwater exceeding the MO-1 standards in the areas of monitoring wells MW-5, MW-11, and MW-19. Approximately 412 tons of soil and groundwater were removed and disposed of at the Waste Management, Inc. Facility in Walker, Louisiana as a result of this remedial action. No Further Action At This Time is granted when contamination is reduced to the extent necessary to achieve the established standards.

In accordance with LAC 33:I. Chapter 13, if land use is going to be changed from industrial to non-industrial, the responsible party shall notify the LDEQ within thirty (30) days and the Shell Chemical LP-Taft Facility shall be reevaluated to determine if conditions are appropriate for the proposed land use. Future use may dictate additional remedial activities. A conveyance notice indicating that the Facility was closed under industrial standards and identifying the future site land use as industrial was filed in both the deed records and mortgage records of the St. Charles Parish Clerk of Court's Office following completion of remediation activities.

An inspection of the site was performed on August 3, 2006 confirming that no investigation derived waste remains on site. No soils may be moved from this location without written authorization from the LDEQ unless they are removed and disposed at a permitted disposal facility. All site monitoring wells were plugged in accordance with LDEQ/LDOTD requirements in July 2006.

The impacted soil and groundwater, constituents of concern, maximum concentration remaining on site and limiting RECAP standards established for this site are listed in the following table:

Medium	Constituent of Concern	Maximum Remaining	Limiting RECAP Standard
		Concentration	
Soil	Diesel Range Organics	3,200 mg/kg	*10,000 mg/kg
Soil	Biphenyl phenyl ether	160 mg/kg	1,100 mg/kg
Soil	Diphenyl ether	580 mg/kg	1,100 mg/kg
Groundwater	Diesel Range Organics	4.62 mg/L	5,280 mg/L
Groundwater	Gasoline Range Organics	0.55 mg/L	6,860 mg/L
Groundwater	Biphenyl phenyl ether	0.61 mg/L	21 mg/L
Groundwater	Diphenyl ether	0.0737 mg/L	21 mg/L
Groundwater	Di-isopropyl ether	0.345 mg/L	2,420 mg/L
Groundwater	Bis(2-ethyl-hexyl)phthalate	0.018 mg/L	0.07 mg/L

^{*}Maximum concentration allowable under RECAP.

Additional information on the details of the investigation and evaluation of this site may be obtained from LDEQ's Public Records Center located in the Galvez Building, Room 127, 602 N. Fifth Street, Baton Rouge, LA 70802. Additional information regarding the Public Records may be obtained by calling (225) 219-3168 or by emailing publicrecords@la.gov

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Recordation Certificate

Charles J. Oubre, Jr.
Clerk of Court
St. Charles Parish Courthouse
PO Box 424
Hahnville, LA '70057
(985) 783-6632

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SHELL CHEMICAL LP

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Index Type: CONVEYANCE

Type of Document: AFFIDAVIT

Recording Pages:

Entry Number: 321565

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Book: 676

Page: 338

Recorded Information

On (Recorded Date): 08/14/2006

At (Recorded Time): 12:42:09PM

Doc ID - 003711000006



CONVEYANCE NOTIFICATION

SHELL TAFT FACILITY

Shell Chemical LP hereby notifies the public that the following Facility located at Agency Interest Number (AI # 583) was closed with contaminant levels present that are acceptable for industrial/commercial use of the property as described in the Louisiana Department of Environmental Quality's (LDEQ) Risk Evaluation/Correction Action Program (RECAP), Section 2.9. In accordance with LAC 33:I., Chapter 13, if land use changes from industrial to non-industrial, the responsible part shall notify the LDEQ within 30 days and the site shall be reevaluated to determine if conditions are appropriate for the proposed land use.

This site was closed in accordance with the Louisiana Administrative Code, Title 33:I, Chapter 13. Information regarding the site is available in the LDEQ public record and may be obtained by contacting the LDEQ Records Manager at (225) 219-3168. Inquiries regarding the contents of the site may be directed to Earl Hayden at Shell Chemical LP, One Shell Plaza, 910 Louisiana, Houston, Texas 77002-4916.

Site Legal Description

That certain tract or parcel of land being located in portions of Sections 44 and 45 of T. 13 S., R. 20 E., West of the Mississippi River, near Taft in St. Charles Parish, Louisiana, and being more particularly described as follows:

Beginning at an ½" iron pipe in concrete which is the southeast corner of a tract of land containing 29.904 acres conveyed by deed from Union Carbide Corporation to the Argus Chemical Corporation (presently the Chemtura Corporation) dated March 29, 1966 and filed and recorded in the Registry's office in Conveyance Office Book 54, Folio 338, said beginning point also being located 200 feet northerly, measured at right angles, from the centerline of the Texas and Pacific Railroad right-of-way, and running thence from said beginning point with a line parallel to and 200 feet from centerline of the railroad right-of-way which is the southernmost boundary of the Chemtura Corporation tract N 57°01'00" W for a distance of 493.18 feet to the "Point of Beginning";

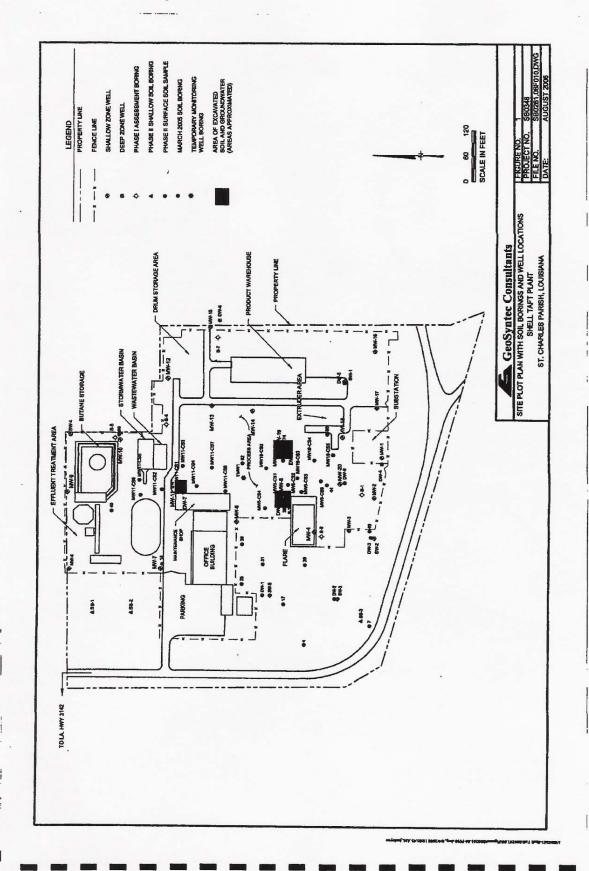
Thence running, from the "Point of Beginning", N 57°01'00" W for a distance of 903.13 feet;

Thence running N 16°20'30" W for a distance of 103.48 feet;

Thence running N 17°51'00" E for a distance of 630.97 feet;

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Compound	Units	Maximum Concentration Remaining On-Site	Location	RECAP MO-1
,soir			TO BOOK	Standard
Diesel range organics	mg/kg	3200	MWAPO	40000
"Biphenyi phenyi ether	mg/kg	160	MW10_CC	10000
"Diphenyl ether	mg/kg	580	MWECEN	1100
'GROUNDWATER			10000	0011
Diesel range organics	ma/L	4.62	CIALE	2001
Gasoline range organics	ma/L	0.555	8400.45	0879
Biphenyi phenyi ether	mo/l	0.61	WW-15	6820
Diphenyl ether	/ba/	0.0797	OI-AAM	27
Di-isopropyl ether	/om	0.245	MVV-13	21
Bis(2-ethyl-hexyl)phthalate		0.000	MW-15	2420
Notes.	"IIIBAL	0.018	DW-01	0.02

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

¹ Maximum detected concentration of soil is based on analytical results for site borings that were not excavated as part of remedial

Maximum concentration allowable under RECAP

* MO-1 standard based on soil saturation value.

² Maximum detected concentration reported in most recent sampling of site monitoring wells in which DNAPL was not observed. MO-1 standards based on GW-3 non-drinking water groundwater classification.

Table includes constituents with concentrations that exceeded published RECAP non-industrial screening standards.

22 August 2006

Mr. Jeffery Jones Remediation Services Division Louisiana Department of Environmental Quality 602 N. Fifth Street Baton Rouge, LA 70802

Subject:

DNAPL Remediation Report and No Further Action Request

Supplemental Information

Shell Chemical LP- Taft, Louisiana

AI # 583

Dear Mr. Jones:

At the request of Mr. Earl Hayden (Shell Chemical LP), GeoSyntec Consultants has developed the following information in support of the DNAPL Remediation Report submitted on August 14, 2006 for the above-referenced facility. Attached please find additional conveyance notification information that documents that these records were incorporated into the St. Charles Parish mortgage records. This information is provided based on your verbal request made on 21 August 2006. If you require additional information please feel free to contact me at 225-929-7333.

Sincerely,

Warren Brady, M.S. Senior Geochemist

Enclosure

CC: E. Hayden -Shell

B. Phelan - EIM

R. Ettinger - GeoSyntec

Recordation Certificate

Charles J. Oubre, Jr. **Clerk of Court** St. Charles Parish Courthouse PO Box 424 Hahnville, LA 70057 (985) 783-6632

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SHELL CHEMICAL LP

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Index Type: MORTGAGE

Type of Document : AFFIDAVIT

Recording Pages:

Entry Number: 321838

Book: 1159

Page: 643

Recorded Information

On (Recorded Date): 08/22/2006

At (Recorded Time): 10:11:59AM

Doc ID - 003726740006



CONVEYANCE NOTIFICATION

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This site was closed in accordance with the Louisiana Administrative Code, Title 33:I, Chapter 13. Information regarding the site is available in the LDEQ public record and may be obtained by contacting the LDEQ Records Manager at (225) 219-3168. Inquiries regarding the contents of the site may be directed to Earl Hayden at Shell Chemical LP, One Shell Plaza, 910 Louisiana, Houston, Texas 77002-4916.

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Beginning at an ½" iron pipe in concrete which is the southeast corner of a tract of land containing 29.904 acres conveyed by deed from Union Carbide Corporation to the Argus Chemical Corporation (presently the Chemtura Corporation) dated March 29, 1966 and filed and recorded in the Registry's office in Conveyance Office Book 54, Folio 338, said beginning point also being located 200 feet northerly, measured at right angles, from the centerline of the Texas and Pacific Railroad right-of-way, and running thence from said beginning point with a line parallel to and 200 feet from centerline of the railroad right-of-way which is the southernmost boundary of the Chemtura Corporation tract N 57°01'00" W for a distance of 493.18 feet to the "Point of Beginning";

Thence running, from the "Point of Beginning", N 57°01'00" W for a distance of 903.13 feet;

Thence running N 16°20'30" W for a distance of 103.48 feet;

Thence running N 17°51'00" E for a distance of 630.97 feet;

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conveyance notification

Page 1 of 2

Thence running S 72°15'00" E for a distance of 642.01 feet to a 1" rod;

Thence running S 17°45'00" W for a distance of 194.73 feet to a 1" rod;

Thence running S 72°15'00" E for a distance of 121 .68 feet to a 1" rod;

Thence running S 17°45'00" W for a distance of 18.54 feet to a 1" rod;

Thence running S 72°15'00" E for a distance of 135.70 feet to a 1" rod;

Thence running S 17°45'00" W for a distance of 663.98 feet;

Thence running S 02°54'00" E for a distance of 81.98 feet the "Point of Beginning".

Said tract contains 15.78 acres and is shown as Parcel "A" on a drawing entitled "Proposed Shell Land Purchase of Taft Facility" by Waldemar S. Nelson & Co., Inc., Revision 1, dated June 15, 1990

Being the same property acquired by Shell Oil Company from Witco Corporation (currently Chemtura Corporation) by act on June 25th, 1990, recorded in the Conveyance Records of St. Charles Parish in Book 425, Folio 562, Entry No. 151385.

A site map is provided in the attached figure. Table 1 identifies the concentration of constituents remaining on-site in soil and groundwater.

Signature of Person Filing Parish Record

Warren Brady, Senior Geochemist, GeoSyntec Consultant
Typed Name and Title of Person Filing Parish Record

Date

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		Maximum Concentration		1 RECAP MO-1
Compound	Units	Remaining On-Site	Location	Standard
SOIL				
Diesel range organics	mg/kg	3200	MW5-CS2	10000
Biphenyl phenyl ether	mg/kg	160	MW19-CS4	1100
Diphenyl ether	mg/kg	580	MW5-CS4	1100
*GROUNDWATER				
Diesel range organics	mg/L	4.62	SW-6	5280
Gasoline range organics	mg/L	0.555	MW-15	6820
Biphenyi phenyi ether	mg/L	0.61	MW-10	21
Diphenyl ether	mg/L	0.0737	MW-13	21
Di-isopropyl ether	mg/L	0.345	MW-15	2420
Bis(2-ethyl-hexyl)phthaiate	mo/L	0.018	רט-אורו	0.07

mg/kg = milligrams per kilogram

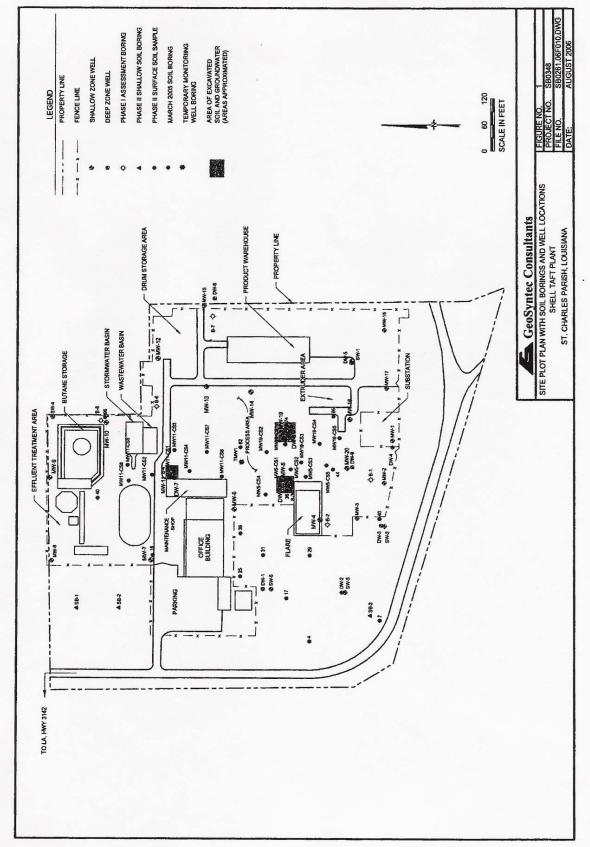
mg/L = milligrams per liter

Maximum detected concentration of soil is based on analytical results for site borings that were not excavated as part of remedial activities.

Maximum concentration allowable under RECAP

* MO-1 standard based on soll saturation value.

² Maximum detected concentration reported in most recent sampling of site monitoring wells in which DNAPL was not observed, MO-1 standards based on GW-3 non-drinking water groundwater classification.
Table includes constituents with concentrations that exceeded published RECAP non-industrial screening standards.



LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY FIELD INTERVIEW FORM AGENCY INTEREST#: 103 100 TIME OF ARRIVAL: 9500 INSPECTION DATE: ALTERNATE ID#: DEPARTURE DATE: 8/05/100 TIME OF DEPARTURE: 10-14 PARISH NAME RECEIVING STREAM (BASIN/SUBSEGMENT): MAILING ADDRESS FACILITY REPRESENTATIVE: (City) FACILITY REPRESENTATIVE PHONE NUMBER: NAME, TITLE, ADDRESS and TELEPHONE of RESPONSIBLE OFFICIAL (If different from above): INSPECTION TYPE: ME - NAT PROGRAM INVOLVED: AIR WATER OTHER WASTE INSPECTOR'S OBSERVATIONS: (e.g. AREAS AND EQUIPMENT INSPECTED, PROBLEMS, DEFICIENCIES, REMARKS, VERBAL COMMITMENTS FROM FACILITY REPRESENTATIVES) MERSELTON & FACTOR, HU MOONTORER WELLS AREAS OF CONCERN: REGULATION **EXPLANATION** CORRECTED? YES NO PHOTOS TAKEN: (Attach Chain-of-custody) RECEIVED BY: SIGNATURE: THAT TO PRINT NAME: (NOTE: SIGNATURE DOES NOT NECESSARILY INDICATE AGREEMENT WITH INSPECTOR'S STATED OBSERVATIONS) INSPECTOR(S) **CROSS REFERENCE:** ATTACHMENTS:

NOTE: The Information contained on this form reflects only the preliminary observations of the Inspector(s). It should not be interpreted as a final determination by the Department of Environmental Quality or any of its officers or personnel as to any matter including, but not limited to, a determination of compliance or lack thereof by the facility operator with any requirements of statute regulations or permits. Each day of non-compliance constitutes a separate violation of the regulations and/or the Louislan Environmental Quality Act.

REVIEWER:

ENCLOSURE 3

AGENCY AND INDUSTRY CONTACTS

For a copy of the administrative record providing detailed information regarding environmental conditions at Shell Chemical LP – Taft Facility, please contact:

Louisiana Department of Environmental Quality
Public Records Center
Galvez Building, Room 127
602 N. Fifth St.
Baton Rouge, LA 70802
(225) 219-3168

For questions regarding the environmental conditions described in the Ready for Reuse Basis of Decision for Shell Chemical L P – Taft Facility, please contact:

Mr. Jeffrey Jones, Geologist & Team Leader Environmental Technology Division Louisiana Department of Environmental Quality P.O. Box 4314 Baton Rouge, Louisiana 70821-4314 (225) 219-3397

Mr. Earl Hayden, Business Representative Shell Chemical LP One Shell Plaza 910 Louisiana Street Houston, TX 77002-4916 (713) 241-1232